

**Notice of Allowability**

Application No.

10/670,204

Applicant(s)

INOKUMA ET AL.

Examiner

Art Unit

Pritham Prabhakher

2622

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 09/26/2003.
2. ☒ The allowed claim(s) is/are 1-8.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application                     |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date <u>09/26/2003</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment                              |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                     | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|  | 9. <input type="checkbox"/> Other _____   |

## DETAILED ACTION

### *Priority*

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Information Disclosure Statement*

The information disclosure statement (IDS) submitted on 09/26/2003 has been considered by the examiner. The submission is in compliance with the provisions of 37 CFR 1.97.

### *Allowable Subject Matter*

**Claims 1-8** are allowed.

The following is an examiner's statement of reasons for allowance:

In regard to independent **Claim 1**, the prior art of record fails to teach or reasonably suggest "*An amplified solid-state image pickup device, comprising: a plurality of pixels each including a photoelectric conversion element for converting incident light into an electric charge, and an amplifier for supplying a signal voltage according to an amount of charge generated by the conversion, wherein the plurality of pixels form an image pickup area, which is divided into a plurality of blocks; a plurality of output amplifiers provided respectively for the plurality of blocks; and signal voltage supply means for supplying signal voltages of different ones of the plurality of pixels respectively to the plurality of output amplifiers in a normal mode, while supplying a signal voltage of the same one of the plurality of pixels to the plurality of output amplifiers in a correction mode*".

Regarding **Claims 2-8**, these claims are allowed as being dependent from allowed independent claim 1.

The following are the closest references found:

**Inui (US Patent No.: 6801255B2)** discloses an image pickup apparatus having two-dimensionally arrayed pixels, a plurality of read-out channels each including a read-out circuit and an amplifier circuit, a parallel-serial conversion circuit which sequentially selects pixel signals output via the plurality of read-out channels and outputs a series of pixel signals.

**Zhang (US Patent No.: 5790191)** discloses an improved method of pre-amplification of signals from a MOS imaging array. Each column of the imaging array includes a charge amplifier. Charge amplifiers for alternating columns are grouped together as an odd group. The remaining charge amplifiers are grouped together as an even group. The signals from the even group and the signals from the odd group are provided to a switch. The switch has two outputs: line A and line B. Lines A and B are routed to two identical second-stage amplifiers. In a first mode, the switch routes the even group to line A and the odd group to line B. In a second mode, the switch routes the even group to line B and the odd group to line A. The switch alternates between the first mode and the second mode during the vertical blanking period of an NTSC scanning scheme.

**Yoneda et al. (US Pub. No.: 2002/0067416A1)** discloses an image pickup apparatus which comprises a plurality of image pickup areas formed on a same semiconductor chip and arranged in the horizontal and the vertical directions, each

*image pickup area having a plurality of pixels arranged in the horizontal and the vertical directions, a plurality of vertical scanning circuits which sequentially scan pixels in the vertical direction to scan a plurality of image pickup areas in the vertical direction independently from each other, a plurality of lenses, at least one of which is provided in each of the plurality of image pickup areas and which focuses light to form an image on the image pickup areas, and a driving circuit which drives the plurality of vertical scanning circuits so that at least a part of a scanning period of each of the plurality of vertical scanning circuits overlaps with each other.*

**Chieh (US Pub No.: 2003/0052982A1)** discloses a technique for the reduction of coherent row-wise and column-wise fixed-pattern noise in MOS image sensing systems. An array of reference pixels is associated with each row of imaging pixels. The output of each imaging pixel is coupled through a respective imaging column amplifier to a column multiplexer, thereby constituting an imaging pixel signal. In one embodiment, the output of each of a number of reference pixels is coupled to a respective reference column amplifier and from there to a reference multiplexer. The reference multiplexer effects a pseudorandom selection from the outputs of the reference column amplifiers to form a reference signal. The reference signal and the column output are differentially coupled to the remainder of the analog signal path. Synthesis of the reference signal as described above distributes row-wise and column-wise noise randomly, thereby mitigating the effects of coherent noise and enhancing image quality.

### **Conclusion**

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pritham Prabhakher whose telephone number is 571-270-1128. The examiner can normally be reached on M-F (7:30-5:00) Alt Friday's Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571)272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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*Pritham D. Prabhakher*

  
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